Application No.: 10/017,410 Response dated: May 1, 2006

Reply to Office Action dated: 02/22/2006

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 1. (canceled)
- 2. (currently amended) An isolated nucleic acid having a nucleotide sequence selected from the group consisting of (i) a polynucleotide consisting of comprising a coding sequence for a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, (ii) a coding sequence of SEQ ID NO:1, (iii) a coding sequence of SEQ ID NO:3, (iv) a nucleic acid having at least about 80% nucleotide sequence identity to at least one of the coding sequence of SEQ ID NO:1 over the full length of the coding sequence of SEQ ID NO:1 and the coding sequence of SEQ ID NO:3 over the full length of the coding sequence of SEQ ID NO:1 over the full length of the coding sequence of SEQ ID NO:1 over the full length of the coding sequence of SEQ ID NO:1 and the coding sequence of SEQ ID NO:3 over the full length of the coding sequence of SEQ ID NO:3 in 40% formamide, 1M NaCl and 1% SDS upon incubation at 37°C followed by washing in 1X SSC at 45°C, wherein the nucleic acids of (iv) and (v) encode a protein overexpressed in liver tumor cells relative to regenerating normal liver cells.
- 3. (original) A genetic construct comprising a polynucleotide of Claim 2 downstream from a heterologous promoter.
 - 4. (original) A host cell transfected with the genetic construct of Claim 3.
 - 5. (canceled)

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6. (withdrawn) A method for identifying modulators of expression of a polynucleotide consisting of a coding sequence for a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, the method including the step of observing a change in the level of expression of the polynucleotide in a host cell after exposure of the host cell to a modulating agent.

7. (withdrawn) A method for diagnosing a hepatocellular cancer in tumor cells from a liver of a human or non-human animal, the method comprising the steps of:

determining an expression level in the liver tumor cells of a polynucleotide consisting of a coding sequence for a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:3;

determining the expression level in regenerating liver tissue of the polynucleotide; diagnosing a hepatocellular cancer when the expression level in the liver tumor cells is higher than the expression level in the regenerating liver tissue.

8. (canceled)

9. (withdrawn) A method as claimed in Claim 7 wherein at least one of the expression level determining steps comprises the step of hybridizing to cellular mRNA an oligonucleotide or a polynucleotide that hybridizes under defined conditions to a nucleotide sequence selected from the group consisting of a coding sequence of SEQ ID NO:1 and a coding sequence of SEQ ID NO:3, the defined conditions being selected from the group consisting of (i) 50% formamide, 5X SSC, and 1% SDS upon incubation at 42°C followed by washing in 0.2X SSC and 0.1% SDS at 65°C and (ii) 5X SSC and 1% SDS upon incubation at 65°C followed by washing in 0.2X SSC and 0.1% SDS at 65°C, under moderately stringent conditions in 40% formamide, 1M NaCl and 1% SDS upon incubation at 37°C followed by washing in 1X SSC at 45°C, a nucleic acid molecule having a nucleotide sequence selected from the group consisting of (i) a polynucleotide the complement of which consists of a coding sequence for a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4, (ii) the complement of a coding sequence of SEQ ID NO:1, (iii) the complement of a coding sequence of SEQ ID NO:3, (iv) a nucleic acid having at least about 80% nucleotide sequence identity to at least one of the

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coding sequence of SEQ ID NO:1 and the coding sequence of SEQ ID NO:3, and (v) an oligonucleotide that hybridizes under said moderately stringent hybridization conditions to at least one of the coding sequence of SEQ ID NO:1 and the coding sequence of SEQ ID NO:3, the nucleic acid molecule being of sufficient length to form a hybrid with the cellular mRNA.

10. (canceled)

11. (currently amended) A kit comprising:

an oligonucleotide or a polynucleotide that hybridizes under defined conditions to a nucleotide sequence eoding sequence for a polypeptide selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:4 a coding sequence of SEQ ID NO:1 and a coding sequence of SEQ ID NO:3, the defined conditions being selected from the group consisting of (i) 50% formamide, 5X SSC, and 1% SDS upon incubation at 42°C followed by washing in 0.2X SSC and 0.1% SDS at 65°C and (ii) 5X SSC and 1% SDS upon incubation at 65°C followed by washing in 0.2X SSC and 0.1% SDS at 65°C 40% formamide, 1M NaCl and 1% SDS upon incubation at 37°C followed by washing in 1X SSC at 45°C; and

at least one of a positive control and a negative control for evaluating a level of expression of the nucleotide coding sequence in a sample.

- 12. (previously presented) A kit as claimed in Claim 11 wherein the positive control is selected from the group consisting of liver tumor cells, and an extract of liver tumor cells.
- 13. (previously presented) A kit as claimed in Claim 11 wherein the negative control is selected from the group consisting of non-tumor liver cells and an extract of non-tumor liver cells.

14-18. (canceled)

19. (new) The isolated nucleic acid of claim 2, wherein the coding sequence is selected from the group consisting of a coding sequence of SEQ ID NO:1 and a coding sequence of SEQ ID NO:3.